

PARULA WARBLER : May 10, two on the college campus ; and May 16, again on the campus.

LINCOLN'S SPARROW : May 12, one in Morgan's woods. A number singing at the lake shore near Oak Point, May 17.

BLACK TERN : May 15, one on the water-works reservoir. Several had been seen by the engineer a few days previously.

GRAY-CHEEKED THRUSH : May 17, one in the woods two miles south of Oberlin.

LEAST BITTERN : May 28, two in the marshes at Oak Point. This is the first ever seen alive by me.

Thus three species have been added to my list of acquaintances without going beyond the county limits. One of them, the Least Bittern, has hitherto been overlooked thro lack of opportunity to search for him. One, Bewick's Wren, is new to the county list.

In this connection it is worth notice that the Bank and Rough-winged Swallows can now be distinguished in the field without a gun. The gray underparts of the Rough-wing are noticeably different from the white banded underparts of the Bank. The more deliberate movements and slightly larger size of the Rough-wing are also good field characteristics.

In addition to those already mentioned, the American Bittern and Black and White Warbler have been heard in song for the first time. It is also cause for congratulation that the songs of the two Cuckoos, and of Wilson's and Olive-backed Thrushes can now be distinguished with certainty.

Everything considered, the season just now closing has been the most profitable one since my list of acquaintances passed the hundred mark, and all of the work has been done without recourse to the shot-gun. Try the field-glass. It pays !

SWALLOW INVESTIGATIONS.

At the request of several members we have decided to continue the Swallow study another year, and trust that this may give all a timely notice that they may be prepared to help us out with copious notes at the close of the season. For the benefit of those who have not already contributed I would say that I desire notes particularly in regard to distribution, migration, nesting, food, and feeding habits, and any other matter you may think of interest.

I have already a large stock of notes, embracing nearly every state, showing the distribution of the species. Still there is much lacking to

make a definite map of the range of each species as I have planned to do. It is possible we may extend the range of some species beyond the limits now established. I particularly want Northern Canada notes. Copies of published lists may be of great use. Included with this part I have some very interesting migration notes. From these I am almost ready to say that the birds come north in a number of well defined lines, branching out from these as the bulk pass on. Thus we find on certain lines the migrations almost in swarms, and at places on the same latitude only what are resident and these a few days behind the firsts at the former places. I need exhaustive notes to confirm my theory.

It is very difficult to determine the nature of the food taken from the minuteness of the particles. No one can doubt but they take enormous numbers of insects, but whether injurious or beneficial, it is the purpose of this investigation to determine. Nearly, if not quite all are taken on the wing. I have determined that the Barn Swallow takes enormous quantities of apple maggot-flies, a fact that will recommend them to the orchardists. I would like to enlist a good entomologist to help me out with this portion of the work. Who will be the first to offer his or her services in the cause of science?

Everyone should provide boxes for the Martins and Tree Swallows. For the former the concensus of opinion seems to be in favor of single room houses, at least eight inches square and six or seven in height, with a two-inch entrance hole in front on a level with the floor. A porch or stool should be placed in front, say three inches wide. The box to be placed on a pole eighteen or twenty-feet high. Some have large colonies in pretentious houses of several rooms. The Martins are quite fastidious in their tastes, preferring a well-made and painted box to a shabby one. Not so the swallow. They care little what the style be so long as it is sufficiently tight to exclude the wet. Rooms for these need be no more than four by six and four or five inches high and the pole ten to fifteen feet high. English Sparrows and the House Wren are the worst enemy they have, and nothing will hold them in check except poison, or a shot-gun in the hands of a skilled gunner. No poultry yard should be without a colony of Martins if possible to get them, as no hawk will come the second time into the locality where they are nesting.

In conclusion I would thank those who have so kindly remembered me with notes, and trust they as well as others will keep their eyes open this season to the end that they may be one of a large throng to assist in the preparation of the life history of one the most interesting families of birds.

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